

SEQUENCE LISTING

Robinson, Andrew <110> Gorringe, Andrew Hudson, Michael Bracegirdle, Phillipa Kroll, John Cartwright, Keith Webb, Steven Langford, Paul Reddin, Karen O'Dwyer, Cliona <120> Neisserial Vaccine Compositions and Methods <130> 1581.0840001 <140> US 09/942,583 <141> 2001-08-31 **RECEIVED** PCT/GB00/00624 <150> <151> 2000-02-22 SEP 1 2 2003 <160> **TECH CENTER 1600/2900** <170> PatentIn version 3.0 <210> <211> 19 <212> DNA <213> Unknown <220> <223> PCR primer <400> 1 gcagtctctc gagctcaag 19 <210> 2 <211> 19 <212> DNA <213> Unknown <220> <223> PCR Primer <400> cctctccact gacagaaaa 19 <210> 3 <211> 17 <212> DNA

B22

<213>

<220> <223> Unknown

PCR Primer

<400> gtaaaa	3 cgac ggccagt	17
<210><211><212><213>	4 17 DNA Unknown	
<220> <223>	PCR Primer	
<400> aacagc	4 tatg gaccatg	17
<210><211><212><213>	DNA	
<220> <223>	Sequencing Primer	
<400> gcagtc	5 tctc gagctcaag	19
<212>	6 22 DNA Unknown	
<220><223>	Sequencing Primer	
<400> cgcttta	6 acac tttatgcttc cg	22
<210><211><212><212><213>	7 17 DNA Unknown	
<220> <223>	Sequencing Primer	
<400> gtaaaa	7 cgac ggccagt	17
	8 17 DNA Unknown	
<220> <223>	Sequencing Primer	
<400>	8 tatg gaccatg	17

-3-

```
<210>
      9
<211>
      76
<212> DNA
<213> Unknown
<220>
<223> Linker Sequence
<220>
<221>
      misc_feature
      (1)..(5)
<222>
<223> Bam HI restriction site
<220>
<221> misc_feature
<222> (75)..(76)
<223> XbaI restriction site
<220>
<221> misc_feature
<222>
      (8)..(15)
<223> NotI restriction site
<220>
<221> misc_feature
<222> (16)..(21)
<223> SnaBI restriction site
<220>
<221> misc_feature
<222>
      (22)..(33)
<223> NcoI restriction site
<220>
<221> misc feature
<222>
      (34)..(39)
<223> SmaI restriction site
<220>
<221> misc_feature
<222>
      (46)...(51)
<223> PstI restriction site
<220>
<221> misc_feature
<222>
      (52) . . (75)
<223> neisserial uptake sequence
<400>
gateceggeg geogetaegt accatgggag etgeeegggg tecagetgea ggeegtetga
                                                                      60
atcatttcag acggct
                                                                      76
<210> 10
<211>
      77
<212> DNA
<213> Unknown
<220>
<223> Complimentary Sequence to SEQ ID NO: 9
```

<400> 10 ctagageegt etgaaatgat teagaeggee tgeagetgga eecegggeag eteceatggt	60			
acgtagcggc cgccggg				
<210> 11 <211> 20 <212> DNA <213> Unknown				
<220> <223> Artificial sequence, alternative 5' end				
<400> 11 tttttggaga attgaccatg	20			
<210> 12 <211> 591 <212> DNA <213> Unknown				
<pre><223> Artificial Sequence Comprising Expression Cassette of nspA <400> 12</pre>				
tgaccataaa ggaaccaaaa tatgaaaaaa gcacttgcca cactgattgc cctcgctctc	60			
ccggccgccg cactggcgga aggcgcatcc tttacgtcca agccgatgcc gcacacgcaa	120			
aagcetcaag etetttaggt tetgecaaag getteageee gegeatetee geaggetace	180			
gcatcaacga cctccgcttc gccgtcgatt acacgcgcta caaaaactat aaagccccat	240			
ccaccgattt caaactttac agcatcggcg cgtccgccat ttacgacttc gacacccaat	300			
cgcccgtcaa accgtatctc ggcgcgcgct tgagcctcaa ccgcgcctcc gtcgacttgg	360			
gcggcagcga cagetteage caaaceteca teggeetegg egtattgaeg ggegtaaget	420			
atgccgttac cccgaatgtc gatttggatg ccggctaccg ctacaactac atcggcaaag	480			
tcaacactgt caaaaacgtc cgttccggcg aactgtccgt cggcgtgcgc gtcaaattct	540			
gatatgcgcc ttattctgca aaccgccgag ccttcggcgg ttttgttttc t	591			
<210> 13 <211> 138 <212> DNA <213> Unknown <220> <223> pMIDG100 partial sequence				
<400> 13				
actagtaacc gagcccgcct aatgagcggg cttttttttg cagtctctcg agctcaagct	60			
togaattotg cagtogacgg tacogogggo cogggatoog ctagcagttt taagattttt	120			

ggagaattga ccatgagt		138
<210><211><212><213>	14 48 DNA Unknown	
<220> <223>	pMIDG100 partial sequence	
<400> tagcat	14 tagt agccgcctaa tgagcgggct tttttttgca gttctaga	48
<210><211><211><212><213>	15 68 DNA Unknown	
<220> <223>	pMIDG201 partial sequence	
<400> actagta	15 aacc gagcccgcct aatgagcggg cttttttttg cagtctctcg agctcaagct	60
tcgaattc		68
<210><211><212><213>	16 83 DNA Unknown	
<220> <223>	pMIDG201 partial sequence	
<400> ggatcc	16 eggc ggceggetae gtaccatggg agetgeeegg ggteeagetg caggetgtet	60
gaatcatttc agacggctct aga		